



DHS Expected Practices

Specialty: All Surgical Specialties

Subject: Accounting Surgical Needles

Date: June 24, 2014

Purpose:

To delineate additional Department of Health Services (DHS) expected practices when accounting small needles in the Operating Room (OR) in the event that they are unaccounted for during the final surgical count.

Target Audience:

Operating Room staff (Physicians, Surgeons, Registered Nurses [RN], Surgical Technicians)

Expected Practice:

Accounting for small needles

There is a debate whether the patient should be subjected to unnecessary x-ray if small needles remain unaccounted for post-surgery. Literature exists on the inability to see small needles in x-rays¹⁻³.

1. When counting and providing surgical needles before or during a procedure, OR staff should make a distinction between small and large needles.

Small Needles: defined as surgical needles, attached to suture sizes 7-0 or smaller, with lengths of < 15 mm⁴.

Large Needles: defined as surgical needles, attached to suture sizes 6-0 or larger, with lengths of > 15 mm⁴.

See attached cross-reference for additional information.

2. Perform an x-ray if surgical instruments, sharps, and/or sponges are unaccounted for during the end of procedure count EXCEPT for small surgical needles.
 - 2.1. When a small surgical needle is unaccounted for,
 - 2.1.1 A thorough search of the surgical area should be performed by all personnel.
 - 2.1.2 If the small needle remains unaccounted for after the initial search,
 - 2.1.2.1 Ordering an x-ray will be left to the surgeon's discretion.

These expected surgical practices were developed by a DHS Surgical Workgroup to offer a guide to Operating Room staff. It has been vetted to other experts at the facility level through DHS Medical, Executive, and Nursing leadership. It is recognized that individual situations happen and a provider's clinical judgment may vary from this *Expected Practice*, but in such cases, compelling documentation for the exception should be provided. There are existing facility policies on surgical counting and these expected practices can be added to these facility policies or serve as an adjunct practice.

2.1.2.2 In the event that an x-ray is not ordered, the surgeon must disclose the unaccounted needle to the patient.

- a. A disclosure must be documented in the patient's medical record by the surgeon.
- b. A documentation of the incorrect count is done by the RN.

2.1.2.3 In the event that the surgeon orders an x-ray, existing policies and procedures must be followed in this instance.

References:

1. Westenberg, A. & Parkinson, R. (2001). The small lost suture needle - is an X-ray worthwhile? *BJU international*; 87(3): 277
2. Ponrartana, S., Coakley, F., Yeh, B., et al. (2008). Accuracy of plain abdominal radiographs in the detection of retained surgical needles in the peritoneal cavity. *Annals of Surgery*; 247(1): 8-12.
3. Kieval, J. Walsh, M. & Daly, M. (2009). Efficacy of portable X-ray in identifying retained suture needles in ophthalmologic cases. *Eye*; 23: 1731-1734.
4. Gibbs, V. Nothing left Behind: A National Surgical patient Safety project to Prevent Retained Surgical Items: Retained Surgical Needles. Available on: <http://www.nothingleftbehind.org/Resources.html> (last accessed July 28, 2014).

CROSS-REFERENCE: NEEDLE SIZE

NOTES:

1. The table is not meant to be seen as a final as it is subject to changes by the manufacturer and/or the availability of these needles at the DHS facilities.
2. There are other companies manufacturing needles but the table is limited to Ethicon™ and Covidien™, as they are currently used at the DHS facilities. In the event that other manufacturers will be used, this table should not be used as a reference point.
3. In general, needles with USP size 7-0 and smaller have needle lengths < 15 mm. However, there are occasional USP sizes >6.0 with needle lengths <15 mm. To maintain familiar language (avoid confusion) used in the operating room and to maintain established processes, these needles will be considered large needles and not include on this table.

USP SIZE	BRAND	NEEDLE TIP	NEEDLE SHAPE	SUTURE TYPE (MATERIAL)	NEEDLE LENGTH (mm)
7-0	ETHICON	SPATULA	1/2 CIRCLE	POLYGLACTIN 910	5.5
7-0	COVIDIEN	SPATULA	3/8 CIRCLE	POLYPROPYLENE	6.0
7-0	ETHICON	SPATULA	1/4 CIRCLE	GUT SUTURE-CHROMIC	6.5
7-0	ETHICON	SPATULA	3/8 CIRCLE	GUT SUTURE-CHROMIC	6.5
7-0	ETHICON	SPATULA	3/8 CIRCLE	POLYGLACTIN 910	6.5
7-0	ETHICON	SPATULA	3/8 CIRCLE	SILK	6.5
7-0	ETHICON	SPATULA	1/2 CIRCLE	GUT SUTURE-CHROMIC	7.0
7-0	COVIDIEN	TAPER	3/8 CIRCLE	POLYPROPYLENE	8.0
7-0	ETHICON	CARDIOVASCULAR NEEDLE	3/8 CIRCLE	POLYPROPYLENE	8.0
7-0	ETHICON	REVERSE CUTTING	3/8 CIRCLE	NYLON	8.0
7-0	ETHICON	REVERSE CUTTING	3/8 CIRCLE	POLYPROPYLENE	8.0
7-0	ETHICON	SPATULA	3/8 CIRCLE	SILK	8.0
7-0	ETHICON	TAPER	3/8 CIRCLE	POLY(HEXAFLUOROPROPYLENE-VDF)	8.0
7-0	ETHICON	TAPER	3/8 CIRCLE	POLYPROPYLENE	8.0
7-0	COVIDIEN	TAPER	3/8 CIRCLE	POLYPROPYLENE	9.0
7-0	COVIDIEN	TAPER CUTTING	3/8 CIRCLE	POLYPROPYLENE	9.0
7-0	ETHICON	CARDIOVASCULAR NEEDLE	3/8 CIRCLE	POLYPROPYLENE	9.3
7-0	ETHICON	TAPER	3/8 CIRCLE	POLY(HEXAFLUOROPROPYLENE-VDF)	9.3
7-0	ETHICON	TAPER	3/8 CIRCLE	POLYPROPYLENE	9.3
7-0	ETHICON	TAPER	3/8 CIRCLE	POLYPROPYLENE	9.3
7-0	ETHICON	TAPER CUTTING	3/8 CIRCLE	POLY(HEXAFLUOROPROPYLENE-VDF)	9.3
7-0	ETHICON	TAPER CUTTING	3/8 CIRCLE	POLYPROPYLENE	9.3
7-0	COVIDIEN	TAPER	1/2 CIRCLE	POLYPROPYLENE	10.0
7-0	COVIDIEN	TAPER	3/8 CIRCLE	POLYPROPYLENE	10.0
7-0	ETHICON	TAPER CUTTING	1/4 CIRCLE	POLYPROPYLENE	10.0
7-0	COVIDIEN	REVERSE CUTTING	3/8 CIRCLE	POLYPROPYLENE	11.0
7-0	COVIDIEN	TAPER	3/8 CIRCLE	POLYPROPYLENE	11.0
7-0	ETHICON	CUTTING	3/8 CIRCLE	NYLON	11.0
7-0	ETHICON	REVERSE CUTTING	3/8 CIRCLE	POLYGLACTIN 910	11.0
7-0	ETHICON	REVERSE CUTTING	3/8 CIRCLE	POLYPROPYLENE	11.0
7-0	ETHICON	TAPER	1/2 CIRCLE	POLYPROPYLENE	11.0
7-0	ETHICON	TAPER	3/8 CIRCLE	POLY(HEXAFLUOROPROPYLENE-VDF)	11.0
7-0	ETHICON	TAPER	3/8 CIRCLE	POLYPROPYLENE	11.0

USP SIZE	BRAND	NEEDLE TIP	NEEDLE SHAPE	SUTURE TYPE (MATERIAL)	NEEDLE LENGTH (mm)
.7-0	COVIDIEN	TAPER	3/8 CIRCLE	POLYPROPYLENE	13.0
7-0	ETHICON	CARDIOVASCULAR NEEDLE	3/8 CIRCLE	POLYPROPYLENE	13.0
7-0	ETHICON	TAPER	3/8 CIRCLE	POLYPROPYLENE	13.0
8-0	ETHICON	TAPER CUTTING	1/4 CIRCLE	NYLON	3.8
8-0	ETHICON	TAPER	3/8 CIRCLE	NYLON	3.8
8-0	ETHICON	TAPER REVERSE CUTTING	1/4 CIRCLE	POLYGLACTIN 910	4.2
8-0	ETHICON	TAPER	3/8 CIRCLE	NYLON	5.0
8-0	ETHICON	TAPER	3/8 CIRCLE	POLYGLACTIN 910	5.0
8-0	ETHICON	SPATULA	1/2 CIRCLE	POLYGLACTIN 910	5.5
8-0	COVIDIEN	SPATULA	3/8 CIRCLE	POLYPROPYLENE	6.0
8-0	COVIDIEN	TAPER	3/8 CIRCLE	POLYPROPYLENE	6.0
8-0	ETHICON	SPATULA	3/8 CIRCLE	NYLON	6.5
8-0	ETHICON	TAPER	3/8 CIRCLE	NYLON	6.5
8-0	ETHICON	TAPER REVERSE CUTTING	1/4 CIRCLE	POLYGLACTIN 910	6.5
8-0	ETHICON	SPATULA	3/8 CIRCLE	POLYGLACTIN 910	6.5
8-0	ETHICON	TAPER	3/8 CIRCLE	POLYGLACTIN 910	6.5
8-0	ETHICON	CARDIOVASCULAR NEEDLE	3/8 CIRCLE	POLYPROPYLENE	6.5
8-0	ETHICON	TAPER	3/8 CIRCLE	POLYPROPYLENE	6.5
8-0	ETHICON	SPATULA	1/2 CIRCLE	NYLON	7.0
8-0	ETHICON	TAPER CUTTING	1/2 CIRCLE	NYLON	7.0
8-0	ETHICON	TAPER	3/8 CIRCLE	POLY(HEXAFLUOROPYLENE)	8.0
8-0	ETHICON	CARDIOVASCULAR NEEDLE	3/8 CIRCLE	POLYPROPYLENE	8.0
8-0	COVIDIEN	TAPER	3/8 CIRCLE	POLYPROPYLENE	8.0
8-0	ETHICON	TAPER	3/8 CIRCLE	POLYPROPYLENE	8.0
8-0	ETHICON	TAPER	3/8 CIRCLE	POLY(HEXAFLUOROPYLENE)	9.3
8-0	ETHICON	CARDIOVASCULAR NEEDLE	3/8 CIRCLE	POLYPROPYLENE	9.3
8-0	ETHICON	TAPER	3/8 CIRCLE	POLYPROPYLENE	9.3
8-0	COVIDIEN	TAPER	3/8 CIRCLE	POLYPROPYLENE	10.0
8-0	COVIDIEN	TAPER	3/8 CIRCLE	POLYPROPYLENE	13.0
9-0	ETHICON	TAPER CUTTING	1/4 CIRCLE	NYLON	3.5
9-0	ETHICON	TAPER	3/8 CIRCLE	NYLON	3.8
9-0	ETHICON	TAPER CUTTING	1/4 CIRCLE	NYLON	3.8
9-0	ETHICON	TAPER	3/8 CIRCLE	POLYGLACTIN 910	3.9
9-0	ETHICON	TAPER	3/8 CIRCLE	POLYPROPYLENE	3.9
9-0	ETHICON	TAPER	3/8 CIRCLE	NYLON	5.0
9-0	ETHICON	SPATULA	3/8 CIRCLE	NYLON	5.1
9-0	ETHICON	TAPER	3/8 CIRCLE	NYLON	5.1
9-0	ETHICON	SPATULA	1/2 CIRCLE	POLYGLACTIN 910	5.5
9-0	ETHICON	SPATULA	1/2 CIRCLE	NYLON	5.5
9-0	ETHICON	TAPER CUTTING	1/2 CIRCLE	NYLON	5.5
9-0	ETHICON	SPATULA	3/8 CIRCLE	NYLON	6.5
9-0	ETHICON	SPATULA	3/8 CIRCLE	POLYGLACTIN 910	6.5
9-0	ETHICON	TAPER	3/8 CIRCLE	NYLON	6.5

USP SIZE	BRAND	NEEDLE TIP	NEEDLE SHAPE	SUTURE TYPE (MATERIAL)	NEEDLE LENGTH (mm)
9-0	ETHICON	TAPER CUTTING	3/8 CIRCLE	NYLON	6.5
9-0	ETHICON	SPATULA	3/8 CIRCLE	POLYPROPYLENE	6.5
9-0	ETHICON	TAPER CUTTING	1/2 CIRCLE	NYLON	7.0
10-0	ETHICON	TAPER CUTTING	1/4 CIRCLE	NYLON	3.5
10-0	ETHICON	TAPER	3/8 CIRCLE	NYLON	3.8
10-0	ETHICON	TAPER	3/8 CIRCLE	POLYPROPYLENE	3.8
10-0	ETHICON	TAPER	3/8 CIRCLE	NYLON	3.9
10-0	ETHICON	TAPER	3/8 CIRCLE	POLYPROPYLENE	3.9
10-0	ETHICON	SPATULA	1/2 CIRCLE	NYLON	4.3
10-0	ETHICON	TAPER	1/2 CIRCLE	NYLON	4.8
10-0	ETHICON	BI-CURVE		POLYGLACTIN 910	5.0
10-0	ETHICON	SPATULA	BI-CURVE	POLYESTER	5.0
10-0	ETHICON	TAPER	3/8 CIRCLE	NYLON	5.1
10-0	ETHICON	TAPER	1/2 CIRCLE	NYLON	5.1
10-0	ETHICON	SPATULA	1/2 CIRCLE	POLYGLACTIN 910	5.5
10-0	ETHICON	SPATULA	3/8 CIRCLE	NYLON	5.5
10-0	ETHICON	SPATULA	1/2 CIRCLE	NYLON	5.5
10-0	ETHICON	TAPER CUTTING	1/2 CIRCLE	NYLON	5.5
10-0	ETHICON	TAPER CUTTING	1/8 CIRCLE	NYLON	5.5
10-0	ETHICON	SPATULA	1/2 CIRCLE	POLYPROPYLENE	5.5
10-0	ETHICON	SPATULA	1/2 CIRCLE	POLYESTER	5.5
10-0	ETHICON	SPATULA	3/8 CIRCLE	NYLON	6.5
10-0	ETHICON	TAPER	3/8 CIRCLE	NYLON	6.5
10-0	ETHICON	TAPER CUTTING	3/8 CIRCLE	NYLON	6.5
10-0	ETHICON	SPATULA	3/8 CIRCLE	POLYPROPYLENE	6.5
10-0	ETHICON	SPATULA	3/8 CIRCLE	POLYGLACTIN 910	6.5
10-0	ETHICON	SPATULA	3/8 CIRCLE	POLYESTER	6.5
10-0	ETHICON	SPATULA	1/4 CIRCLE	POLYGLACTIN 910	7.0
10-0	ETHICON	TAPER CUTTING	1/2 CIRCLE	NYLON	7.0
10-0	ETHICON	TAPER CUTTING	1/4 CIRCLE	POLYPROPYLENE	13.0
10-0	ETHICON	SPATULA	1/4 CIRCLE	POLYPROPYLENE	13.0
11-0	ETHICON	TAPER	3/8 CIRCLE	NYLON	4.1
11-0	ETHICON	SPATULA	1/2 CIRCLE	POLYESTER	4.3
11-0	ETHICON	TAPER CUTTING	1/2 CIRCLE	NYLON	5.5

Sources:

Covidien. Surgipro™ Suture available on: <http://www.covidien.com/syneture>

Ethicon. Ethicon Product Catalog available on: <http://www.ecatalog.ethicon.com>